

2. In his comments to support the acceptance of the name *Turbo bidens* Linnaeus, 1758 for the species in question, Welter-Schultes (BZN 63: 46–47) makes a number of assumptions which are either poorly supported by facts, or are purely speculative:

(a) Müller's diagnosis (in contrast to Giusti & Manganelli's initial statement) was not clear enough – Müller's description and the figures cited by him leave no doubt as to the species intended; the use of the name *papillaris* in subsequent literature is unequivocal. The purpose of Giusti & Manganelli's proposal of a neotype is not to remove doubt as to the identification of *Helix papillaris* Müller, but to fix that name to a particular strain in the species complex.

(b) Rossmässler's (1835) dictionary of Latin descriptive terms cannot be applied to the earlier text of Linnaeus, 1758 – Possibly true, but this does not support the assertion that Linnaeus, 1758 described the same species as Müller. The latter clearly described in Latin the conspicuous colour pattern which is missing in Linnaeus's diagnosis.

(c) Linnaeus may have had 'good reasons' not to mention this colour pattern – It is inconceivable that the founder of systematics of the entire Plant and Animal Kingdoms would have suppressed mentioning a conspicuous character in his diagnoses, which is alluded to by later authors in both the genus and species name of the taxon here discussed.

(d) Linnaeus may have had only dead shells at his disposal – Unproven speculation. His words: 'testa . . . pellucida' (shell transparent) is unlikely to apply to dead (and hence bleached and opaque) shells. I would speculate that a scientist of Linnaeus's experience would have refrained from basing a new species on weathered shells.

(e) Linnaeus may have had several species in the family CLAUSILIIDAE in mind, of which only one (*viz. Papillifera papillaris*) showed the aforementioned colour pattern, which was therefore not considered diagnostic for the composite nominal taxon *Turbo bidens* – It is quite possible that Linnaeus united several species under that name, but this cannot be proven. I would expect that Linnaeus would not have regarded a clausiliid with a conspicuous colour pattern as conspecific with other clausiliids which lacked this feature.

### **Comment on the proposed conservation of *Palamopus* E. Hitchcock, 1845 (Ichnotaxa, Reptilia?)**

(Case 3348; see BZN 62: 237–239; 63: 49–50)

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1. The term 'Sauroidichnites' was coined by Edward Hitchcock in 1837 as a subdivision of the general term 'Ichnites', and immediately afterwards used as a suborder of the order 'Dipodichnites' in the class 'Ichnolithes' (Hitchcock, 1841, 1844), thus in the first place 'Sauroidichnites' must be regarded as a suprafamilial taxon. Haubold (1971, 1974) pointed out that only in 1845 did Hitchcock begin to use generic names (i.e. different from higher level terms). Indeed, Hitchcock (1848,

p. 130) stated that he had introduced the term 'Sauroidichnites' intending, by the term, merely to convey an intimation that they might prove to be reptilian. It is therefore argued that 'Sauroidichnites' (and likewise 'Ornithichnites' and 'Tetrapodichnites') was not used as a generic name in the sense of binominal nomenclature, but as a general term denoting an object class, in which case 'Sauroidichnites' is unavailable as a generic name and does not need to be suppressed.

2. However, as Hitchcock (1837) subdivided the 'Ornithichnites' into 'Pachydactyli' and 'Leptodactyli' and used 'Ornithichnites' to include several ichnospecies, it could be argued that *Sauroidichnites*, *Ornithichnites* and *Tetrapodichnites* were used as generic appellations and general terms at the same time and could be acceptable as available generic names, possibly in the sense of a 'collective group'.

3. The question of the type species can be summarized as follows: Hitchcock (1837) used *Sauroidichnites* to include five species-group names. The type ichnospecies of the ichnogenus *Sauroidichnites* Hitchcock, 1837 – if considered available – is *Sauroidichnites palmatus* (Hitchcock, 1836) by original monotypy, as the four other species names coined by Hitchcock in 1837 without description are unavailable. However, although it is the older name and an objective synonym, *Palamopus palmatus* is not the type species of *Palamopus*, as implied by Rainforth (para. 2). The type species (by monotypy) is *Palamopus anomalus* Hitchcock, 1845, as correctly stated by Hay (1902). If *Sauroidichnites* and *Ornithichnites* are considered unavailable generic names, that does not affect the availability of '*Ornithichnites*' *palmatus*, the valid specific name of the type species of *Palamopus* (Article 11.9.3.1 of the Code). Should the name *palmatus* prove to be nomenclaturally unavailable, *P. anomalus* may be reinstated as the valid name of the type species.

4. Rainforth stated that *Palamopus* has been used as the name for an ichnotaxon in four published works (Kuhn, 1963; Haubold, 1971, 1984; Olsen & Radian, 1986). Kuhn (1963) accepted only *Palamopus* Hitchcock, 1845 with *P. palmatus* (Hitchcock, 1841, note date, with *Sauroidichnites palmatus* in synonymy) as the valid name of the type species ('Genotypus'), thus apparently ignoring the older references. However, Kuhn (1963) cited the works of Hitchcock older than 1841, and there is no doubt that Kuhn had actually seen them, as the first series of volumes of the *American Journal of Science and Arts* is available, with early 19th century possession stamps, in the Bayerische Staatsbibliothek in Munich, which was Kuhn's main literature source (Kuhn, 1963, p. 3). It is therefore concluded that Kuhn, possibly following Hay (1902) and others, consistently did not accept species names in these older works as available, and generic names only beginning with Hitchcock, 1845. Haubold (1971 and follow-up publications of 1974 and 1984 in the second, enlarged edition) explicitly considered *Sauroidichnites* as not available as a generic name, following Kuhn (1963, and the references cited therein); hence, he used *Palamopus* (Haubold, 1971), with *Sauroidichnites* in synonymy. Finally, Olsen & Padian (1986, p. 261) listed *Palamopus* only in the synonymy of *Batrachopus*, and more specifically three species of *Palamopus*, including '*P. palmatus* Hitchcock, 1841', in tentative subjective synonymy with *Batrachopus deweyi* (Hitchcock, 1843) (Olsen & Padian, 1986, p. 262), so this reference cannot be counted as usage of *Palamopus* as the valid name of a taxon.

5. To summarize: Of the limited record of only four works cited by Rainforth to support a universal usage of the younger name *Palamopus*, instead of the older

*Sauroidichnites* during the past 50 years, one work did not use *Palamopus* as a valid name, two used *Palamopus* with *Sauroidichnites* in explicit synonymy, and three did not consider *Sauroidichnites* an available generic name in zoological nomenclature. An accurate record by Lockley & Meyer (2004, p. 174) for *Palamopus* as a (presumably) valid taxon name was published probably too late to be employed by Rainforth. However, four references, at the most, cannot be considered as establishing prevailing usage. The nomenclature would hardly be upset, if the older name *Sauroidichnites* was to be used and strict priority would be reinstated. It is my contention, therefore, that the proposed suppression of *Sauroidichnites* is not supported by the reasoning of Rainforth. However, I strongly recommend following previous authors in considering *Sauroidichnites* Hitchcock, 1837 as not available as a generic name for reasons stated in para. 1 above.

6. Therefore, amending the application by Rainforth, the International Commission on Zoological Nomenclature is accordingly asked:

- (1) to place on the Official List of Generic Names in Zoology the name *Palamopus* E. Hitchcock, 1845 (gender: masculine), type species by monotypy *Palamopus anomalus* E. Hitchcock, 1845;
- (2) to place on the Official List of Specific Names in Zoology the name *palmatus* E. Hitchcock, 1836, as published in the binomen *Ornithichnites palmatus* (senior objective synonym of the type ichnospecies of *Palamopus* E. Hitchcock, 1845);
- (3) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Palamopus* E. Hitchcock, 1848 (a junior synonym of *Palamopus* E. Hitchcock, 1845);
- (4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *anomalus* E. Hitchcock, 1845, as published in the binomen *Palamopus anomalus* (junior objective synonym of *Ornithichnites palmatus* E. Hitchcock, 1836).

#### Additional references

- Haubold, H. 1974. *Die fossilen Saurierfährten*. 168 pp. Ziemsen Verlag, Wittenberg Lutherstadt.
- Lockley, M.C. & Meyer, C. 2004. Crocodylomorph trackways from the Jurassic to Early Cretaceous of North America and Europe: implications for ichnotaxonomy. *Ichnos*, **11**(1–2): 167–178.